

Claims

1. A drawer interlock mechanism comprises :

A fixation base is fixed at one end of the rail. In the center of the fixation base, there is the holding groove, which has concave openings every 90-degree angle along the inner periphery. There is a penetrating hole in the center of top face along with two corresponding position-limiting curved grooves. At the bottom of the fixation base, there is a slide groove in longitudinal direction. The fixation base has a sticking block on each side of the top face in the longitudinal direction.

An axial cam has an expandable tenon extending along the outer edge of each side. On the two outer edges formed in the direction of 90-degree intersecting lines from the axial cam and the expandable tenon, there are a big column and a small column. In the middle of the big column and the small column, there is a rotation axis. A moving and stopping block is situated at the bottom of the axial cam. The top face of the axial cam is inserted into the holding groove of the fixation base. The axis is used as a rotation axle.

Two braking slides are inserted into the slide groove of the fixation base. Its external holding groove can hold a braking stick for movement. On each of the two sides of the two braking slides, there is an extending blockage, so the two braking slides connect to form a rectangular frame to accommodate the stopping block of the axial cam.

A guiding switch is set to the front end of the slide. The side has a guiding slide groove and a curved slide groove. The guiding slide groove has a front guiding groove and a rear guiding groove. When the slide is moving toward the fixation base, the guiding slide groove for the guiding switch can fit the small column of the axial cam, while the curved slide groove can fit the big column of the axial cam. So the small column can follow the front guiding groove to drive the big

column into the curved slide groove. The big column follows the curved slide groove and the small column follows the rear guiding groove to make 90-degree rotation for the axial cam.

2. As described in claim 1 for a drawer interlock mechanism, the slide groove of the fixation base has a convex point on each side and the two points are positioned in a decline angle.
3. As described in claim 1 for a drawer interlock mechanism, the two braking slides have two correspondent guiding groove on both sides of the plate, so no matter the front or back face of the braking slide is inserted in the slide groove, the guiding groove can fit the convex point on the slide groove. On the groove surface at the introduction end of the guiding groove, there is a locking point to stop the convex point. Thus, when the two braking slides are sliding outward, they are subject to position limitation by the blockage of the locking point and the convex point of the slide groove.
4. As described in claim 1 for a drawer interlock mechanism, the guiding switch has a decline guiding surface on the front guiding groove of the guiding slide groove.
5. As described in claim 1 for a drawer interlock mechanism, the path formed by the curved slide groove of the guiding switch can provide the big column of the axial cam with 90-degree rotation.
6. As described in claim 1 for a drawer interlock mechanism, the front guiding groove of the guiding slide groove of the guiding switch has a decline surface, which can move the small column and drive the rotation of the axial cam. It also drives the big column to smoothly enter the curved slide groove. So even under improper operation, it provides the axial cam with protection measure to recover to the normal position. So it can continue to control the axial cam in the guiding groove and the curved slide groove making 90-degree rotation.